Digitized by the Internet Archive
in 2026

https://archive.org/details/biochemical-and-biophysical-research-comms_1988_157_contents

BIOCHEMICAL AND BIOPHYSICAL Research Communications

EDITORS

John N. Abelson
Ernesto Carafoli
Pedro Cuatrecasas
I. C. Gunsalus
B. L. Horecker
Yasuo Kagawa
M. Daniel Lane
William J. Lennarz
William D. McElroy
Masami Muramatsu
Claude Paoletti
Alberto Sols

Volume 157 • 1988

ACADEMIC PRESS, INC.
Harcourt Brace Jovanovich, Publishers
San Diego New York Boston
London Sydney Tokyo Toronto

Copyright © 1988 by Academic Press, Inc.

ALL RIGHTS RESERVED

No part of this publication may be reproduced or transmitted in any form, or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

The appearance of the code at the bottom of the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made for personal or internal use, or for the personal or internal use of specific clients. This consent is given on the condition, however, that the copier pay the stated per copy fee through the Copyright Clearance Center, Inc. (27 Congress Street, Salem, Massachusetts 01970), for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. Copy fees for pre-1988 articles are as shown on the article title pages; if no fee code appears on the title page, the copy fee is the same as for current articles.

0006-291X/88 $1.50

MADE IN THE UNITED STATES OF AMERICA

BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS

CONTENTS

Volume 157, Number 1, November 30, 1988

AUTHOR INDEX, Volume 157, Number 1, November 30, 1988 iii

Protein Kinase C Activities and Bindings of a Phorbol Ester Tumor Promoter in 41 Cell Lines *Kazuhiro Chida, Noriko Kato, Shuhei Yamada, and Toshio Kuroki* 1

Inhibition of Phorbol Ester-Caused Induction of Ornithine Decarboxylase and Tumor Promotion in Mouse Skin by Staurosporine, a Potent Inhibitor of Protein Kinase C *Shuhei Yamada, Kenji Hirota, Kazuhiro Chida, and Toshio Kuroki* 9

A New Method for High Yield Purification of Type β Transforming Growth Factor from Human Platelets *A. J. M. van den Eijnden-van Raaij, I. Koornneef, and E. J. J. van Zoelen* 16

Amino Acid Sequence of the Signal Peptide of Mitochondrial Nicotinamide Nucleotide Transhydrogenase as Determined from the Sequence of Its Messenger RNA *Mutsuo Yamaguchi, Youssef Hatefi, Kathleen Trach, and James A. Hoch* 24

Characterization of the Liver Mitochondrial Cytochrome P450 Catalyzing the 26-Hydroxylation of 5β-Cholestane-3α, 7α, 12α-triol *Helena Dahlbäck* 30

Synthesis of Phospholipid Transfer Proteins from Maize Seedlings *C. Vergnolle, V. Arondel, F. Tchang, M. Grosbois, F. Guerbette, A. Jolliot, and J. C. Kader* 37

Evidence for an Endogenous Factor Involved in Maintenance of Pirenzepine High-Affinity Binding in Rat Brain Stem *Chris J. van Koppen and Mordechai Sokolovsky* 42

Activin-A: A Modulator of Multiple Types of Anterior Pituitary Cells *Masafumi Kitaoka, Itaru Kojima, and Etsuro Ogata* 48

Centrilobular Expression of Ethanol-Inducible Cytochrome P450 (IIE1) in Rat Liver *Magnus Ingelman-Sundberg, Inger Johansson, Kai E. Penttilä, Hans Glaumann, and Kai O. Lindros* 55

Enzymatic Sulfation of Salivary Mucins: Structural Features of 35 S-Labeled Oligosaccharides *B. L. Slomiany, J. Piotrowski, H. Nishikawa, and A. Slomiany* 61

Putative Termination Sites for rDNA Transcription in Rice *K. Nandabalan and J. D. Padayatty* 68

Brain Microsomal Oxidation of Δ^8- and Δ^9-Tetrahydrocannabinol *Kazuhito Watanabe, Tatsuro Tanaka, Ikuo Yamamoto, and Hidetoshi Yoshimura* 75

[19-^{14}C] Androstenedione: A New Substrate for Assaying Aromatase and Studying Its Reaction Mechanism *Douglas F. Covey, Patrick C. McMullan, Linda L. Wixler, and Mayo Cabell* 81

Nitric Oxide: A Cytotoxic Activated Macrophage Effector Molecule *John B. Hibbs, Jr., Read R. Taintor, Zdenek Vavrin, and Elliot M. Rachlin* 87

Increased [^{3}H]-Thymidine Incorporation into DNA of Organ-Cultured Adrenal Explants from Rats Injected with Corticotropin and/or Cysteamine *E. Sewerynek, M. Szkudliński, A. Lewiński, and J. Kunert-Radek* 95

Modeling of the Homoeo Domain Suggests Similar Structure to Repressors *Panagiotis A. Tsonis, Vasili Carperos, and Teruna Shiahaan* 100

Reduction of Nitrite to Nitric Oxide by Enteric Bacteria *Xiao-bing Ji and Thomas C. Hollocher* 106

The Cellular Internalization of Recombinant Interferon-γ Differs from That of Natural Interferon-γ *Vladimir M. Kushnaryov, Hector S. MacDonald, J. James Sedmak, and Sidney E. Grossberg* 109

Vitronectin Is a Substrate for Transglutaminases *David C. Sane, Tammy L. Moser, Anne M. M. Pippen, Charles J. Parker, Komandoor E. Achyuthan, and Charles S. Greenberg* 115

Transient Activation of c-*myc* Protooncogene Expression in Leydig Cells by Human Chorionic Gonadotropin *T. Lin, J. Blaisdell, K. W. Barbour, and E. A. Thompson* 121

DNA Sequence Dependence of ATP Hydrolysis by RecA Protein *Mohan Amaratunga and Albert S. Benight* 127

2,3-Bisphosphoglycerate Inhibits Hemoglobin Synthesis and Phosphorylation of Initiation Factor 2 by Casein Kinase II in Reticulocyte Lysates *Mary I. Gonzatti and Jolinda A. Traugh* 134

Conformational States of the Insulin Receptor
Esther Schenker and Ronald A. Kohanski 140

Changes in the Levels of Superoxide Anion Radical and Superoxide Dismutase during the Estrous Cycle of *Rattus norvegicus* and Induction of Superoxide Dismutase in Rat Ovary by Lutropin *Malini Laloraya, Pradeep kumar G, and Manmohan M. Laloraya* 146

A Simple and Rapid Method for the Preparation of Homologous DNA Oligonucleotide Hybridization Probes from Heterologous Gene Sequences and Probes
E. Stuart Maxwell and Kevin D. Sarge 154

Role of Oxygen during Horseradish Peroxidase Turnover and Inactivation
Xiaoyan Ma and Steven E. Rokita 160

Identification of the Major Phosphoprotein Secreted by Many Rodent Cell Lines as 2AR/Osteopontin: Enhanced Expression in H-*ras*-Transformed 3T3 Cells
Ann Marie Craig, Mohamed Nemir, Barid B. Mukherjee, Ann F. Chambers, and David T. Denhardt 166

Triticone A: A Novel Bioactive Lactam with Potential as a Molecular Probe
Doug Kenfield, Scott Strobel, Fumio Sugawara, Deborah Berglund, and Gary Strobel 174

Effect of Genistein on Topoisomerase Activity and on the Growth of [VAL 12]Ha-*ras*-Transformed NIH 3T3 Cells *Akira Okura, Hiroharu Arakawa, Hirofumi Oka, Tomoko Yoshinari, and Yoshiaki Monden* 183

Detection of Carbon–Phosphorus Lyase Activity in Cell-Free Extracts of *Enterobacter aerogenes* *Kousaku Murata, Noriko Higaki, and Akira Kimura* 190

Classification of the Insulin-like Growth Factor Binding Proteins into Three Distinct Categories According to Their Binding Specificities *Briony Forbes, Laszlo Szabo, Robert C. Baxter, F. John Ballard, and John C. Wallace* 196

cDNA Cloning and Sequence Determination of Pig Gastric ($H^+ + K^+$)-ATPase
Masatomo Maeda, Jun Ishizaki, and Masamitsu Futai 203

Identification of [Hydroxyproline^3]-bradykinin Released from Human Plasma and Plasma Protein Cohn's Fraction IV-4 by Trypsin *Manabu Sasaguri, Masaharu Ikeda, Munehito Ideishi, and Kikuo Arakawa* 210

Human Glucosamine-6-sulfatase cDNA Reveals Homology with Steroid Sulfatase
Daniel A. Robertson, Craig Freeman, Paul V. Nelson, C. Phillip Morris, and John J. Hopwood 218

Observation of Fatigue Unrelated to Gross Energy Reserve of Skeletal Muscle during Tetanic Contraction—an Application of ^{31}P-MRS
S. Takata, H. Takai, T. Ikata, and I. Miura 225

Rapid Turnover of Sphingosine Synthesized *de Novo* from [^{14}C]Serine by Chinese Hamster Ovary Cells *Kimberly A. Medlock and Alfred H. Merrill, Jr.* 232

Cloning, Sequencing, and Expression of cDNA for Human β-Galactosidase
Akihiro Oshima, Akihiko Tsuji, Yoshiro Nagao, Hitoshi Sakuraba, and Yoshiyuki Suzuki 238

Nitrous Oxide Exposure Reduces Hepatic C_1-Tetrahydrofolate Synthase Expression in Rats
Charles K. Barlowe and Dean R. Appling 245

Experimental Osteoarthritic Articular Cartilage Is Enriched in Guanidine-Soluble Type VI Collagen *Cahir A. McDevitt, Julie A. Pahl, Shirley Ayad, Raymond R. Miller, Masaaki Uratsuji, and Jack T. Andrish* 250

Complementary DNA Cloning and Sequencing of Rat Ovarian Basic Fibroblast Growth Factor and Tissue Distribution Study of Its mRNA
Shunichi Shimasaki, Naoya Emoto, Ann Koba, Maluz Mercado, Futoshi Shibata, Karen Cooksey, Andrew Baird, and Nicholas Ling 256

Modulation of Polyamine Biosynthesis and Transport by Oncogene Transfection
Barbara K. Chang, Paul R. Libby, Raymond J. Bergeron, and Carl W. Porter 264

Role of Interleukin-6 in Regulating Synthesis of C-Reactive Protein and Serum Amyloid A in Human Hepatoma Cells Lines
Mahrukh K. Ganapathi, Lester T. May, Debra Schultz, Anne Brabenec, Joel Weinstein, Pravinkumar B. Sehgal, and Irving Kushner 271

Human Progesterone A-Receptors Can Be Synthesized Intracellularly and Are Biologically Functional *Nancy L. Krett, Lisa L. Wei, Mary D. Francis, Steven K. Nordeen, David F. Gordon, William M. Wood, and Kathryn B. Horwitz* 278

Isolation and Characterization of Monoclonal Antibodies against Ribonuclease Inhibitor
Mark Feldman, D. Stave Kohtz, and David L. Kleinberg 286

Activation of a New Protein Kinase by Okadaic Acid Class Tumor Promoters
Toshihiro Sassa, Masami Suganuma, Hiroko Suguri, Shigeru Yoshizawa, Werner W. Richter, Mitsuru Hirota, and Hirota Fujiki 295

Inhibitory Effect of Transforming Growth Factor-β on Epidermal Growth Factor-Induced Proliferation of Cultured Rat Aortic Smooth Muscle Cells
Yasuyoshi Ouchi, Jiro Hirosumi, Masae Watanabe, Akinori Hattori, Tetsuro Nakamura, and Hajime Orimo 301

Characterization of Specific Receptors for Atrial Natriuretic Factor on Cultured Bovine Brain Capillary Endothelial Cells
Kevin R. Smith, Akira Kato, and Ronald T. Borchardt 308

Obesity as a Risk Factor for Drug-Induced Organ Injury. VI. Increased Hepatic P450 Concentration and Microsomal Ethanol Oxidizing Activity in the Obese Overfed Rat
Daniel E. Salazar, Christopher L. Sorge, and George B. Corcoran 315

Localization of the Insulin-Binding Site to the Cysteine-Rich Region of the Insulin Receptor α-Subunit
Cecil C. Yip, Helga Hsu, Rohit G. Patel, Dennis M. Hawley, Betty A. Maddux, and Ira D. Goldfine 321

Inhibition of Atrial Natriuretic Peptide Secretion by Forskolin in Noncontracting Cultured Atrial Myocytes
Hiroshi Iida and Ernest Page 330

Independent Inhibition of DNA Synthesis by Protein Kinase C, Cyclic AMP, and Interferon α/β in Rabbit Aortic Smooth Muscle Cells
Yasuo Fukumoto, Yasuhiro Kawahara, Ken-ichi Kariya, Shun-ichi Araki, Hisashi Fukuzaki, and Yoshimi Takai 337

Cytoplasmic pH in the Action of Epidermal Growth Factor (EGF) in Cultured Porcine Thyroid Cells
Nobuyuki Takasu, Yoshitaka Nagasawa, Ichiro Komiya, Takashi Yamada, and Yoshifusa Shimizu 346

Self-Assembly of Porphyrins on Nucleic Acid Templates
Esther J. Gibbs, Ignacio Tinoco, Jr., Marcos F. Maestre, Panayiotis A. Ellinas, and Robert F. Pasternack 350

Inhibitors of Sterol Synthesis: 14α-Ethyl-5α-cholest-7-ene-3β,15β-diol Induces Changes in the Sterol Composition and the Morphology of CHO-K1 Cells
Frederick D. Pinkerton, Akihiro Izumi, and George J. Schroepfer, Jr. 359

Characterization of a Recombinant Murine Interleukin-6: Assignment of Disulfide Bonds
Richard J. Simpson, Robert L. Moritz, Emiel Van Roost, and Jacques Van Snick 364

In Vivo [^{35}S]Methionine Interaction with Rat-Liver DNA and the Effect of Chemical Carcinogens
Darja Kanduc and Ernesto Quagliariello 373

A Stably Tranfected c-*myc* Cat Hybrid Gene Is Not Regulated by Serum in NIH3T3 Cells
Michaela Götschl and Dirk Eick 379

Synthetic Ferrichrome Analogues with Growth Promotion Activity for *Arthrobacter flavescens*
A. Shanzer, J. Libman, R. Lazar, Y. Tor, and T. Emery 389

CSF-1 and c-*fms* Gene Expression in Human Carcinoma Cell Lines
Junko Horiguchi, Matthew L. Sherman, Adam Sampson-Johannes, Barbara L. Weber, and Donald W. Kufe 395

Isolation and Identification of a High-Molecular-Weight Brain Natriuretic Peptide in Porcine Cardiac Atrium
Naoto Minamino, Kenji Kangawa, and Hisayuki Matsuo 402

Cloning and Sequence Analysis of cDNA Encoding a Precursor for Porcine Brain Natriuretic Peptide
Keiji Maekawa, Tetsuji Sudoh, Mitsuru Furusawa, Naoto Minamino, Kenji Kangawa, Hiroaki Ohkubo, Shigetada Nakanishi, and Hisayuki Matsuo 410

ERRATUM
Volume 155, Number 2, September 15, 1988: Erika L. F. Holzbaur and Ming Tien, "Structure and Regulation of a Lignin Peroxidase Gene from *Phanerochaete chrysoporium*," *pp. 626-633* 417

Volume 157, Number 2, December 15, 1988

AUTHOR INDEX, Volume 157, Number 2, December 15, 1988 iii

Enhancer of Human Polyoma JC Virus Contains Nuclear Factor I-Binding Sequences; Analysis Using Mouse Brain Nuclear Extracts
Taka-aki Tamura, Takafumi Inoue, Kyosuke Nagata, and Katsuhiko Mikoshiba 419

In Situ Hybridization Patterns of Zebrafish Homeobox Genes Homologous to *Hox-2.1* and *En-2* of Mouse *Pål Rasmus Njølstad and Anders Fjose* 426

The Effects of SUN 1165, a Novel Sodium Channel Blocker, on Ischemia-Induced Mitochondrial Dysfunction and Leakage of Lysosomal Enzymes in Canine Hearts *Satoru Sugiyama, Yoshihiro Hanaki, Takuo Ogawa, Nobuyuki Hieda, Kazumi Taki, and Takayuki Ozawa* 433

Degradation of Aspartate Aminotransferase in Rat Liver Lysosomes *Atsushi Sato, K. M. Faisal Khan, Yasuo Natori, and Mitsuko Okada* 440

H_2O_2 Activates CD11b/CD18-Dependent Cell Adhesion *Göran Skoglund, Ian Cotgreave, Jorge Rincon, Manuel Patarroyo, and Magnus Ingelman-Sundberg* 443

Quantum Mechanical Modeling of Aspartic Proteinase Interactions: Difference in Binding of Diastereomeric Statine Models *Amiram Goldblum* 450

Molecular Cloning and Primary Structure of Human 15-Lipoxygenase *Elliott Sigal, Charles S. Craik, Ella Highland, Dorit Grunberger, Lawrence L. Costello, Richard A. F. Dixon, and Jay A. Nadel* 457

Transport and Utilization of Free Fatty Acids in *Triatoma infestans* *J. L. Soulages, O. J. Rimoldi, O. R. Peluffo, and R. R. Brenner* 465

Three Types of Amyloid Protein Precursor mRNA in Human Brain: Their Differential Expression in Alzheimer's Disease *Seigo Tanaka, Shigenobu Nakamura, Kunihiro Ueda, Masakuni Kameyama, Satoshi Shiojiri, Yasuyuki Takahashi, Nobuya Kitaguchi, and Hirataka Ito* 472

Properties of Human Kidney Heme Oxygenase: Inhibition by Synthetic Heme Analogs and Metalloporphyrins *Pavel Martasek, Karim Solangi, Alvin I. Goodman, Richard D. Levere, Richard J. Chernick, and Nader G. Abraham* 480

Phospholipase A_2 from Human Synovial Fluid: Purification and Structural Homology to the Placental Enzyme *Chun-Yen Lai and Kenji Wada* 488

Reduction of Enzyme Activity of Tyrosine Hydroxylase and Aromatic L-Amino Acid Decarboxylase in Clonal Pheochromocytoma PC12h Cells by Carcinogenic Heterocyclic Amines *Makoto Naoi, Tsutomu Takahashi, Hiroshi Ichinose, Keiji Wakabayashi, Takashi Sugimura, and Toshiharu Nagatsu* 494

Location and Methylation Pattern of a Nuclear Matrix Associated Region in the Human Proα2(I) Collagen Gene *G. C. Ellis, A. F. Grobler-Rabie, F. S. Hough, and A. J. Bester* 500

Heart Protein Kinase C Activity Increases during Progression of Disease in the Cardiomyopathic Hamster *Timothy C. Chambers and Gabriel Eilon* 507

Enhancement of 2- and 16α-Estradiol Hydroxylation in MCF-7 Human Breast Cancer Cells by 2,3,7,8-Tetrachlorodibenzo-*p*-dioxin *J. F. Gierthy, D. W. Lincoln II, S. J. Kampcik, H. W. Dickerman, H. L. Bradlow, T. Niwa, and G. E. Swaneck* 515

Phorbol 12-Myristate 13-Acetate Inhibition of Leukotriene D_4-Induced Signal Transduction Was Rapidly Reversed by Staurosporine *James D. Winkler, Henry M. Sarau, James J. Foley, and Stanley T. Crooke* 521

Lovastatin is Hypertriglyceridemic in Syrian Golden Hamsters *Dilip Amin, Susan Gustafson, and Mark H. Perrone* 530

DNA-Stimulated Protein Phosphorylation in HeLa Whole Cell and Nuclear Extracts *Timothy H. Carter, Cynthia R. Kopman, and Calvin B. L. James* 535

Preparation and Structural Characterization of Nucleosomal Core Particles Lacking One H2A.H2B Dimer *Santiago de la Escalera, María Angela Nieto, and Enrique Palacián* 541

Messenger RNA Expressed in Mouse Teratocarcinoma Stem Cells and Down-Regulated by a Tumor-Promoting Phorbol Ester Codes for a Novel Transmembrane Protein *Junji Akagi, Hisayuki Nomiyama, Chiaki Setoyama, Kazunori Shimada, and Masanobu Akagi* 548

Gene for Parathyroid Hormone-like Peptide Is on Rat Chromosone 2 *G. N. Hendy, A. Y. Sakaguchi, T. Yasuda, D. K. Weber, L.-M. Wang, M. C. Yoshida, D. Banville, and D. Goltzman* 558

Augmentation of DNA Synthesis in Guinea Pig Bone Marrow Cells by Platelet-Activating Factor (PAF) *Toshiyuki Kato, Ichiro Kudo, Hidetoshi Hayashi, Kikuo Onozaki, and Keizo Inoue* 563

A Computergraphic Determination of the Chemotactic Peptide Preferred Conformation *S. F. Semus, E. L. Becker, C. Toniolo, and R. J. Freer* 569

Appearance of Hybridoma Growth Factor/Interleukin-6 in the Serum of Mice Bearing a Methylcholanthrene-Induced Sarcoma *Johan Gelin, Lyle L. Moldawer, Inga Englesse, Christina Lonnroth, Peter deMan, Stephen F. Lowry, Catharina Svanborg-Eden, and Kent G. Lundholm* 575

Age-Related Changes of Heat Shock Protein Gene Transcription in Human Peripheral Blood Mononuclear Cells *Yasuhiro Deguchi, Shigeru Negoro, and Susumu Kishimoto* 580

ACTH Stimulates Turnover of the Phosphatidylinositol-glycan *Eduardo N. Cozza, María del Carmen Vila, Celso E. Gomez-Sanchez, and Robert V. Farese* 585

Effects of 8-Methoxypsoralen and Ultraviolet Light A on EGF Receptor (HER-1) Expression *X.-Y. Yang, Z. A. Ronai, R. M. Santella, and I. B. Weinstein* 590

Inhibitory Effect of Glycyrrhizin on Polypeptide Phosphorylation by Polypeptide-Dependent Protein Kinase (Kinase P) *in Vitro* *Kenzo Ohtsuki and Nakao Ishida* 597

Regulation of Proliferation by the Cholera Toxin B Subunit in FRTL-5 Cells May Involve a Mechanism Independent from the Modulation of Membrane Receptor Function *Toru Tetsumoto, Kaoru Takada, Nobuyuki Amino, and Kiyoshi Miyai* 605

Protection from Heat-Induced Protein Migration and DNA Repair Inhibition by Cycloheximide *Elwood P. Armour, Yong J. Lee, Peter M. Corry, and Michael J. Borrelli* 611

Differential Expression of Two Homologous and Clustered Oncogenes, *Hstl* and *Int-2*, during Differentiation of F9 Cells *Teruhiko Yoshida, Hisako Muramatsu, Takashi Muramatsu, Hiromi Sakamoto, Osamu Katoh, Takashi Sugimura, and Masaaki Terada* 618

Fe^{2+} Oxidation of α-Crystallin Produces a 43,000-Da Aggregate Composed of A and B Chains Crosslinked by Nonreducible Covalent Bonds *Martin J. McDermott, Raúl Chiesa, and Abraham Spector* 626

Mannose 6-Phosphate Increases the Affinity of Its Cation-Independent Receptor for Insulin-like Growth Factor II by Displacing Inhibitory Endogenous Ligands *Constantin Polychronakos, Harvey J. Guyda, and Barry I. Posner* 632

Effect of Phorbol Myristate Acetate on Fatty Acid Uptake and Distribution in Human Promyelocytic Leukemia (HL-60) Cells *in Vitro* *U. N. Das* 639

Expression of H-2K and H-2D Genes by PYS-2 Teratocarcinoma Cells *Toshi Nagata, Takashi Morita, Masami Nozaki, and Aizo Matsushiro* 648

Identification of the Full-Length Coding Sequence for Human Galactosyltransferase (β-*N*-Acetylglucosaminide:β1,4-Galactosyltransferase) *Khaled A. Masri, Hubert E. Appert, and Michiko N. Fukuda* 657

Activation of Muscle Phosphofructokinase by α-Glucose 1,6-Bisphosphate and Fructose 2,6-Bisphosphate Is Differently Affected by Other Allosteric Effectors and by pH *Vicente Andrés, José Carreras, and Roser Cussó* 664

Identification of a Platelet M_r 22,000 GTP-Binding Protein as the Novel *smg*-21 Gene Product Having the Same Putative Effector Domain as the *ras* Gene Products *Toshihiko Ohmori, Akira Kikuchi, Katsuhiko Yamamoto, Masahito Kawata, Jun Kondo, and Yoshimi Takai* 670

Norepinephrine and GTP-γ-S Increase Myofilament Ca^{2+} Sensitivity in α-Toxin-Permeabilized Arterial Smooth Muscle *Junji Nishimura, Michael Kolber, and Cornelis van Breemen* 677

Mass Measurements of Inositol(1,4,5)trisphosphate in Rat Cerebral Cortex Slices Using a Radioreceptor Assay: Effects of Neurotransmitters and Depolarization *R. A. John Challiss, Ian H. Batty, and Stefan R. Nahorski* 684

The Polyene Antibiotic Amphotericin B Inhibits the Na^+/K^+ Pump of Human Erythrocytes *A. Vertut-Doi, P. Hannaert, and J. Bolard* 692

Morphine Activation of c-*fos* Expression in Rat Brain *Sulie L. Chang, Stephen P. Squinto, and Richard E. Harlan* 698

Rat Testis $P450_{17\alpha}$ cDNA: The Deduced Amino Acid Sequence, Expression, and Secondary Structural Configuration *Mikio Namiki, Masaya Kitamura, Ellen Buczko, and Maria L. Dufau* 705

Isolation and Primary Structure of Human Peptide YY *Kazuhiko Tatemoto, Itsuro Nakano, George Makk, Pamela Angwin, Michael Mann, James Schilling, and Vay Liang W. Go* 713

Isolation of a Biologically Active Fragment from the Carboxy Terminus of the Fetal Rat Binding Protein for Insulin-like Growth Factors *Jia-Fang Wang, Brian Hampton, Tevie Mehlman, Wilson H. Burgess, and Matthew M. Rechler* 718

Azathioprine's Inhibitory Effect on Prostaglandin E_2 Production Is Not via Cyclooxygenase Inhibition *Nava Naveh, Chana Weissman, and Shlomo A. Dottan* 727

The Affinities of Prostaglandin H_2 and Thromboxane A_2 for Their Receptor Are Similar in Washed Human Platelets *P. R. Mayeux, H. E. Morton, J. Gillard, A. Lord, T. A. Morinelli, A. Boehm, D. E. Mais, and P. V. Halushka* 733

Thapsigargin, a Novel Promoter, Phosphorylates the Epidermal Growth Factor Receptor at Threonine 669 *Kunio Takishima, BethAnn Friedman, Hirota Fujiki, and Marsha Rich Rosner* 740

Specific Cleavage of Diphtheria Toxin by Human Urokinase *Witold Cieplak, Charles Hasemann, and Leon Eidels* 747

Characterization and Regulation by Protein Kinase C of Renal Glomerular Atrial Natriuretic Peptide Receptor-Coupled Guanylate Cyclase *Barbara J. Ballermann, Ravi B. Marala, and Rameshwar K. Sharma* 755

Autocrine Differentiation-Inhibiting Factor (ADIF) from Chicken Erythroleukemia Cells Acts on Human and Mouse Early BFU-E Erythroid Progenitors *V. Krsmanovic, N. Morardet, J. M. Biquard, G. Mouchirout, B. Fasciotto, A. Ristic, C. Parmentier, J. P. Blanchet, D. Kanazir, J. P. Durkin, and J. F. Whitfield* 762

In Vitro Activation of Neuraminidase in the β-Galactosidase–Neuraminidase-Protective Protein Complex by Cathepsin C *Raffaele M. D'Agrosa and John W. Callahan* 770

The Structure of the Amino Terminal Transforming Segment of the p21 Protein, Tyr^4–Tyr^{20} (with Asp^{12}), by Two-Dimensional NMR *P. A. Longo, M. S. Broido, J. Chen, H.-F. Kung, and M. R. Pincus* 776

The Gene for Rat Uncoupling Protein: Complete Sequence, Structure of Primary Transcript, and Evolutionary Relationship between Exons *Frédéric Bouillaud, Serge Raimbault, and Daniel Ricquier* 783

Transforming Growth Factor-β (TGFβ) Is Chemotactic for Human Monocytes and Induces Their Expression of Angiogenic Activity *David M. Wiseman, Peter J. Polverini, David W. Kamp, and S. Joseph Leibovich* 793

Transcellular Conversion of Endogenous Arachidonic Acid to Lipoxins in Mixed Human Platelet–Granulocyte Suspensions *Charlotte Edenius, Jesper Haeggström, and Jan Åke Lindgren* 801

α-Interferon Accelerates Lateral Diffusion of Daudi Cell Surface Differentiation Antigens: Measurement by Fluorescence Redistribution after Photobleaching *Elisabeth Balint, Adorjan Aszalos, and Philip M. Grimley* 808

3-Deoxy-D-manno-octulosonate-8-phosphate Synthase Catalyzes the C–O Bond Cleavage of Phospho*enol*pyruvate *Lizbeth Hedstrom and Robert Abeles* 816

Molecular Cloning of Rat Phosphoprotein Phosphatase 2Aβ cDNA and Increased Expressions of Phosphatase 2Aα and 2Aβ in Rat Liver Tumors *Yoshinori Kitagawa, Ryuichi Sakai, Tomoko Tahira, Hiroyuki Tsuda, Nobuyuki Ito, Takashi Sugimura, and Minako Nagao* 821

Two Homologous Oncogenes, *HST1* and *INT2*, Are Closely Located in Human Genome *Akihito Wada, Hiromi Sakamoto, Osamu Katoh, Teruhiko Yoshida, Jun Yokota, Peter F. R. Little, Takashi Sugimura, and Masaaki Terada* 828

Demonstration of a 1–3 Disulfide Bond in a Synthetic Nonapeptide Derived from the Signal Sequence and N-Terminus of Human γ-Interferon *B. Pramanik, A. Tsarbopoulos, J. E. Labdon, M. Czarniecki, T. L. Nagabhushan, and P. P. Trotta* 836

Characterization of Activin A Binding Sites on the Human Leukemia Cell Line K562 *Carolyn A. Campen and Wylie Vale* 844

ERRATA

Volume 153, Number 3, June 30, 1988: Kenichi Norioka, Masako Hara, Masayoshi Harigai, Atsushi Kitani, Tatsuo Hirose, Kimihiro Suzuki, Makoto Kawakami, Hirotsugu Tabata, Mitsuhiro Kawagoe, and Haruo Nakamura, "Production of B Cell Stimulatory Factor-2/Interleukin-6 Activity by Human Endothelial Cells," pp. 1045-1050 850

Volume 155, Number 3, September 30, 1988: Teruhiko Yoshida, Masakazu Tsutsumi, Hiromi Sakamoto, Kiyoshi Miyagawa, Shinichi Teshima, Takashi Sugimura, and Masaaki Terada, "Expression of the *HST1* Oncogene in Human Germ Cell Tumors," pp. 1324-1329 850

Volume 157, Number 3, December 30, 1988

AUTHOR INDEX, Volume 157, Number 3, December 30, 1988 ii

Phosphorylation by Cyclic AMP-Dependent Protein Kinase of a Human Platelet Mr 22,000 GTP-Binding Protein (*smg* p21) Having the Same Putative Effector Domain as the *ras* Gene Products *Masahiko Hoshijima, Akira Kikuchi, Masahito Kawata, Toshihiko Ohmori, Eikichi Hashimoto, Hirohei Yamamura, and Yoshimi Takai* 851

Interleukin-4 Inhibits Interleukin-1 Synthesis by a Post-transcriptional Mechanism *Mikko Hurme, Tessa Palkama, and Marja Sihvola* 861

Characterization of the Calpastatin Defect in Erythrocytes from Patients with Essential Hypertension *S. Pontremoli, F. Salamino, B. Sparatore, R. De Tullio, R. Pontremoli, and E. Melloni* 867

A 64-kDa Protein Is a Candidate for a Thyrotropin-Releasing Hormone Receptor in Prolactin-Producing Rat Pituitary Tumor Cells (GH_4C_1 Cells) *Marianne Wright, Anders Høgset, Peter Alestrøm, and Kaare M. Gautvik* 875

Immunochemical Detection of the α-Subunit of the G-Protein, G_z, in Membranes and Cytosols of Mammalian Cells *K. Spicher, K.-D. Hinsch, H. Gausepohl, R. Frank, W. Rosenthal, and G. Schultz* 883

γ-Interferon Inhibits Rat Granulosa Cell Differentiation in Culture *William C. Gorospe, Tammy Tuchel, and Barry G. Kasson* 891

Organization of the Gene Encoding the Insulin-like Growth Factor Binding Protein IBP-1 *A. Brinkman, C. A. H. Groffen, D. J. Kortleve, and S. L. S. Drop* 898

Control of Parathyroid Hormone-Degrading Activity in the Opossum Kidney Cell: Possible Involvement of Protein Kinase C *Toru Yamaguchi, Masaaki Fukase, and Takuo Fujita* 908

The Amino Acid Sequence of the 24-kDa Subunit, an Iron–Sulfur Protein, of Rat Liver Mitochondrial NADH Dehydrogenase Deduced from cDNA Sequence *Morimitsu Nishikimi, Yoshitaka Hosokawa, Haruo Toda, Hiroshi Suzuki, and Takayuki Ozawa* 914

Inhibition and Labeling of the Rat Renal Na^+/H^+-Exchanger by an Antagonist of Muscarinic Acetylcholine Receptors *T. Friedrich and G. Burckhardt* 921

The *in Vitro* Activation of Cyclic AMP Production by Either Forskolin or Isoproterenol in the Syrian Hamster Pineal during the Day Is Not Accompanied by an Increase in Melatonin Production *Celsa Santana, Juan M. Guerrero, Russel J. Reiter, and Maureen E. Troiani* 930

Human Hexokinase: Sequences of Amino- and Carboxyl-Terminal Halves Are Homologous *Shigeo Nishi, Susumu Seino, and Graeme I. Bell* 937

The Calcium-Dependent Electrophoretic Shift of α-Lactalbumin, the Modifier Protein of Galactosyl Transferase *Marvin P. Thompson, Merton L. Groves, Dorothy P. Brower, Harold M. Farrell, Jr., Robert Jenness, and Claire E. Kotts* 944

Isozymes of Fructose 6-Phosphate,2-kinase:Fructose-2,6-bisphosphatase in Rat and Bovine Heart, Liver, and Skeletal Muscle *Matsuo Taniyama, Kazuo Kitamura, Helmut Thomas, J. W. R. Lawson, and Kosaku Uyeda* 949

Characterization of Receptor Tyrosine-Specific Protein Kinases by the Use of Inhibitors. Staurosporine Is a 100-Times More Potent Inhibitor of Insulin Receptor than IGF-I Receptor *Yoko Fujita-Yamaguchi and Satish Kathuria* 955

Tumor Necrosis Factor Induced DNA Fragmentation of HL-60 Cells *Laurence Elias, Penny B. Moore, and Stephen M. Rose* 963

Molecular Cloning of a cDNA for Rat Liver Monoamine Oxidase B *Akio Ito, Toyoko Kuwahara, Shuichiro Inadome, and Yasuhiro Sagara* 970

Molecular Mechanism of Action of the Vasoconstrictor Peptide Endothelin *Catherine Van Renterghem, Paul Vigne, Jacques Barhanin, Annie Schmid-Alliana, Christian Frelin, and Michel Lazdunski* 977

Interaction of DNA Hairpin Loops and a Complementary Strand by a Triplet of Base Pairs *Ulrich Baumann, Ronald Frank, and Helmut Blöcker* 986

Manganese, Mn-Dependent Peroxidases, and the Biodegradation of Lignin *Ian T. Forrester, Anthony C. Grabski, Richard R. Burgess, and Gary F. Leatham* 992

Inhibition of Na,K-ATPase and Sodium Pump by Anticancer Ether Lipids and Protein Kinase C Inhibitors ET-18-OCH_3 and BM 41.440 *Kazuhiko Oishi, Bin Zheng, John F. White, William R. Vogler, and J. F. Kuo* 1000

Purification from Human Hepatoma Cells of a 130-kDa Membrane Glycoprotein with Properties of the Heparin-Binding Growth Factor Receptor *Dennis DiSorbo, Er-gang Shi, and Wallace L. McKeehan* 1007

Cachectin/TNF Stimulation of ATP Synthesis in 30A-5 Preadipocytes
Kweon Haeng Lee and Ki-Han Kim 1015
The Electrode Reaction of *Euglena gracilis* Cytochrome *c*-552 at Edge-Oriented Pyrolytic Graphite *Vinitha Senaratne and Edmond F. Bowden* 1021
Relationships between the Calmodulin-Dependent Adenylate Cyclases Produced by *Bacillus anthracis* and *Bordetella pertussis* *Donald L. Robertson* 1027
The Human Protein S Locus: Identification of the PSα Gene as a Site of Liver Protein S Messenger RNA Synthesis *Hans K. Ploos van Amstel, Pieter H. Reitsma, and Rogier M. Bertina* 1033
Induction of γ-Glutamyl Transpeptidase Activity by All-*trans*-Retinoic Acid in Cultured Rat Liver Epithelial Cells *Ming-Sound Tsao and Gerald Batist* 1039
Agonist but Not Phorbol Ester Induced Desensitization of Human Lymphocyte Prostaglandin Receptor Is Dependent on Tubulin Polymerization
Christer Nordstedt, Anders Kvanta, and Bertil B. Fredholm 1046
Homologous Recombination between Human Immunodeficiency Viral DNAs in Cultured Human Cells: Analysis of the Factors Influencing Recombination
S. Kalyanaraman, R. Jannoun-Nasr, D. York, P. A. Luciw, R. Robinson, and A. Srinivasan 1051
Nucleation and Accretion of Bioelastomeric Fibers at Biological Temperatures and Low Concentrations *Francesco Sciortino, M. Ugo Palma, Dan W. Urry, and Kari U. Prasad* 1061
Species Crossreactivity of Human Progesterone Receptor Monoclonal Antibodies: Western Blot Analysis *Gary O. Gray and Pondichery G. Satyaswaroop* 1067
Retinol-Binding Protein Is Synthesized in the Mammalian Eye
Robert L. Martone, Eric A. Schon, DeWitt S. Goodman, Dianne R. Soprano, and Joseph Herbert 1078
Five-hundred megahertz ^{1}H NMR of Chlorophylls in the Major Light-Harvesting Chlorophyll-Protein Complex of Photosystem II
Cor Dijkema, Geoff F. W. Searle, and Tjeerd J. Schaafsma 1085
Protein Kinase C Activities Are Increased in Rat Thyroid Epithelial Cells Expressing V-*ras* Genes *A. Spina, E. Chiosi, G. Illiano, M. T. Berlingieri, A. Fusco, and M. Grieco* 1093
Characterization and Localization of a Novel Neuroreceptor for the Peptide Sarafotoxin
I. Ambar, Y. Kloog, E. Kochva, Z. Wollberg, A. Bdolah, U. Oron, and M. Sokolovsky 1104
Suppression of Synthesis of Tropomyosin Isoform 2 in Metastatic v-Ha-*ras*-Transformed NIH3T3 Cells *Keizo Takenaga, Yohko Nakamura, and Shigeru Sakiyama* 1111
Inhibition of the Proteolysis of Rat Erythrocyte Membrane Proteins by a Synthetic Inhibitor of Calpain *Shujaath Mehdi, Michael R. Angelastro, Jeffery S. Wiseman, and Philippe Bey* 1117
Effect of Metal Ions on the Adaptive Response Induced by *N*-Methyl-*N*-nitrosourea in *Escherichia coli* *Kazuhiko Takahashi, Takao Imaeda, and Yutaka Kawazoe* 1124
Vitronectin Is Phosphorylated by a cAMP-Dependent Protein Kinase Released by Activation of Human Platelets with Thrombin *Beatriz Korc-Grodzicki, Miriam Tauber-Finkelstein, Daniel Chain, and Shmuel Shaltiel* 1131
Molecular Cloning of a cDNA Coding for 70-kDa Subunit of Soluble Guanylate Cyclase from Rat Lung *Masaki Nakane, Shuichi Saheki, Takayoshi Kuno, Kuniaki Ishii, and Ferid Murad* 1139
Inhibition of Hepatic Fatty Acid Oxidation by Bezafibrate and Bezafibroyl CoA
Patrick I. Eacho and Patricia S. Foxworthy 1148
Partial Agonist Activity of the Bombesin-Receptor Antagonist [Leu^{14}-ψ-CH_2-NH-Leu^{13}]-Bombesin in Frog Peptic Cells
Kenneth E. J. Dickinson, Naomi Uemura, M. Chandra Sekar, Huey B. McDaniel, Wayne Anderson, David H. Coy, and Basil I. Hirschowitz 1154
Corticosteroids Suppress Cyclooxygenase Messenger RNA Levels and Prostanoid Synthesis in Cultured Vascular Cells *J. Martyn Bailey, Amar N. Makheja, James Pash, and Mukesh Verma* 1159
Endothelin: A New Inhibitor of Renin Release *Masao Takagi, Hiroaki Matsuoka, Keiichiro Atarashi, and Shigeru Yagi* 1164
Crystallization and Some Properties of Acetylpolyamine Amidohydrolase from *Mycoplana bullata* *Kinya Fujishiro, Mayumi Ando, and Takayuki Uwajima* 1169

Constitutive and Inducible Expression of Cloned Human Interferon-β1 Gene in HeLa Cells through an Episomal Eukaryotic Vector *Maurizio Giannì, Andrea Gallina, Giuseppe Barbanti-Brodano, and Gabriele Milanesi* 1175

Two Different Protein Kinase Activities Phosphorylate *Ras2* Protein in *Saccharomyces cerevisiae* *Taduru L. V. Sreenath, Diego Breviario, Nadera Ahmed, and Ravi Dhar* 1182

The Platelet Insulin Receptor: Detection, Partial Characterization, and Search for a Function *C. Falcon, G. Pfliegler, H. Deckmyn, and J. Vermylen* 1190

Opposite Effect of Interferon-γ on PGE_2 Release from Interleukin-1-Stimulated Human Monocytes or Fibroblasts *Laurence Friteau, Elisa Francesconi, Danielle Lando, Bernard Dugas, and Chantal Damais* 1197

ACTH Receptor-Mediated Induction of Leukocyte Cyclic AMP *Eve W. Johnson, J. E. Blalock, and Eric M. Smith* 1205

Apolipoprotein E Genotyping Using the Polymerase Chain Reaction and Allele-Specific Oligonucleotide Probes *Karl H. Weisgraber, Yvonne M. Newhouse, and Robert W. Mahley* 1212

Calcium Sensitive Isocitrate and 2-Oxoglutarate Dehydrogenase Activities in Rat Liver and AS-30D Hepatoma Mitochondria *Anne N. Murphy, Joanne K. Kelleher, and Gary Fiskum* 1218

Cyclosporine-A Transport in Isolated Renal Proximal Tubular Cells: Inhibition by Calcium Channel Blockers *Chandrasekharam N. Nagineni, David B. N. Lee, Brijesh C. Misra, and Norimoto Yanagawa* 1226

Characterization of Mutant TMK368K Pig Citrate Synthase Expressed in and Isolated from *Escherichia coli* *Claudia T. Evans, Daniel D. Owens, Clive A. Slaughter, and Paul A. Srere* 1231

Di-O-alkylglycerol, Mono-O-alkylglycerol, and Ceramide Inositol Phosphates of *Leishmania mexicana mexicana* Promastigotes *B. N. Singh, C. E. Costello, D. H. Beach, and G. G. Holz, Jr.* 1239

Metabolism of Inositol-1,3,4,6-tetrakisphosphate to Inositol Pentakisphosphate in Adrenal Glomerulosa Cells *László Hunyady, Albert J. Baukal, Gaetan Guillemette, Tamás Balla, and Kevin J. Catt* 1247

Dissociative Extraction and Partial Purification of Osteogenin, a Bone Inductive Protein, from Rat Tooth Matrix by Heparin Affinity Chromatography *R. W. Katz and A. H. Reddi* 1253

A Measurement of Cerebral Glucose Uptake Rate by ^{31}P MRS *K. Koga and I. Miura* 1258

Radiolabeling of the Interferon-α Receptor *Jerome A. Langer* 1264

Bradykinin Stimulates Phosphodiesteratic Cleavage of Phosphatidylcholine in Cultured Endothelial Cells *Thomas W. Martin and Kevin C. Michaelis* 1271

Decrease in Bicarbonate Transport Activities during Epididymal Maturation of Porcine Sperm *Naomichi Okamura, Yutaka Tajima, and Yoshiki Sugita* 1280

The Induction of Glycogenolysis in the Perfused Liver by Platelet Activating Factor Is Mediated by Prostaglandin D_2 from Kupffer Cells *Johan Kuiper, Yolanda B. De Rijke, Freek J. Zijlstra, Marieke P. Van Waas, and Theo J. C. Van Berkel* 1288

Differences in Calcium Uptake in Native Canine Cardiac Microsomes Are Correlated with the Ratio of Unphosphorylated to Phosphorylated Phospholamban as Determined by Western Blot Analysis *C. Kasinathan, Z.-C. Xu, and M. A. Kirchberger* 1296

The Presence of a Novel Cellular Retinoic Acid-Binding Protein in Chick Embryos: Purification and Partial Characterization *Toshihiro Kitamoto, Takashi Momoi, and Mariko Momoi* 1302

Nucleotide Sequence and Tissue Distribution of the Human Mitochondrial Aspartate Aminotransferase mRNA *Stanislas Pol, Bernadette Bousquet-Lemercier, Muriel Pave-Preux, André Pawlak, Bertrand Nalpas, Pierre Berthelot, Jacques Hanoune, and Robert Barouki* 1309

Alterations in Intermediate Filament Proteins in Rat Kidney Proximal Tubule Epithelial Cells *Paul B. Hatzinger, Qin Chen, Liqun Dong, and James L. Stevens* 1316

Endogenous ADP-Ribosylation in Human Platelets *Luis Molina y Vedia, Roger D. Nolan, and Eduardo G. Lapetina* 1323

Insulin-Mediated Translocation of Glucose Transporters from Intracellular Membranes to Plasma Membranes: Sole Mechanism of Stimulation of Glucose Transport in L6 Muscle Cells *Toolsie Ramlal, Vivian Sarabia, Philip J. Bilan, and Amira Klip* 1329

Fibroblast Growth Factors Are Present in Adult Cardiac Myocytes, *in Vivo* *Edith Speir, Zhou Yi-Fu, Michael Lee, Shashi Shrivastav, and Ward Casscells* 1336

Characterization of Rat and Human Tyrosine Hydroxylase Genes: Functional Expression of Both Promoters in Neuronal and Non-neuronal Cell Types
G. T. Coker III, L. Vinnedge, and K. L. O'Malley 1341

Isolation and Characterization of 5-Lipoxygenase from Tulip Bulbs
P. Reddanna, J. Whelan, P. S. Reddy, and C. C. Reddy 1348

Transforming Growth Factor-β Is a Potent Inhibitor of IL-1 Induced Protease Activity and Cartilage Proteoglycan Degradation
Srinivasan Chandrasekhar and Anita K. Harvey 1352

Endothelin Stimulates Phospholipase C in Cultured Vascular Smooth Muscle Cells
Thérèse J. Resink, Timothy Scott-Burden, and Fritz R. Bühler 1360

Azidothymidine Inhibits Mitogen Stimulated Growth and DNA-Repair in Human Peripheral Lymphocytes *B. Munch-Petersen* 1369

Regulation of Ion Transport in Hypophysial Pars Intermedia Follicular Cell Monolayers
Napoleone Ferrara and Denis Gospodarowicz 1376

Localization of pp60$^{c\text{-}src}$ in Growth Cone of PC12 Cell
Kenji Sobue and Keiko Kanda 1383

A Short Incubation Time in Insulin Binding Experiments Leads to Disappearance of Negative Cooperativity in H35 Hepatoma Cells
Cornelis P. de Vries, Timon W. van Haeften, and Eduard A. van der Veen 1390

PGE2-Induced Cyclic AMP Accumulation in Human CD4+ T Cells Is Strongly Enhanced during the CD2-Mediated Activatory Process *Ioannis Theodorou, Georges Bismuth, Sabine le Gouvello, Helene Gouy, and Patrice Debre* 1396

Age-Related Changes in the Expression of Cytochrome P450 (b+e) Gene in the Rat after Phenobarbitone Administration *P. C. Rath and M. S. Kanungo* 1403

ATP Stimulates Calcium Influx in Primary Astrocyte Cultures
J. T. Neary, C. van Breemen, E. Forster, L. O. B. Norenberg, and M. D. Norenberg 1410

Xenobiotic Oxidation by Cytochrome P450-Enriched Extracts of *Streptomyces griseus*
Michael K. Trower, F. Sima Sariaslani, and Fulton G. Kitson 1417

Evidence for the Existence of Tissue Specific Isoenzymes of Mitochondrial NADH Dehydrogenase *V. J. Clay and C. I. Ragan* 1423

Bradykinin-Induced Generation of Inositol 1,4,5-Triphosphate in Fibroblasts and Neuroblastoma Cells: Effect of Pertussis Toxin, Extracellular Calcium, and Down-Regulation of Protein Kinase C *Tao Fu, Yukio Okano, and Yoshinori Nozawa* 1429

Increase of Natural Benzodiazepines in Wheat and Potato during Germination
Johannes Wildmann 1436

ERRATA

Volume 156, Number 2, October 31, 1988: Marta Menegazzi, Franca Gelosa, Marina Tommasi, Kazuhiko Uchida, Masanao Miwa, Takashi Sugimura, and Hisanori Suzuki, "Induction of Poly(ADP-Ribose) Polymerase Gene Expression in Lectin-Stimulated Human T Lymphocytes Is Dependent on Protein Synthesis," pp. 995–999. 1444

Volume 154, Number 3, August 15, 1988: M. Galdieri, R. Faraonio, and V. Colantuoni, "Detection of Cellular Retinol-Binding Protein Messenger RNA in the Somatic Cells of the Rat Seminiferous Tubules," pp. 1174–1181. 1444